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I N T E R - O F F I C E      C O R R E S P O N D E N C E

Richmond, Virginia

To: R. Ferguson

Date: August 18, 1992

From: D. C. Watson

Subject:

Environmental Analyses - Operational Plans - 1993

Objective:

Develop and apply analytical techniques and methodology in support of studies by the Environmental Compliance and Engineering and the Applied Technology groups and in support of associated R&D projects.

Strategy:

- #1 The Environmental Compliance and Engineering department has requested a significantly increased R&D involvement in direct support to PM environmental concerns during 1993 including an emphasis on providing in-house analytical data for process stack effluents. Sampling and analysis protocols will be developed, verified and applied for the qualitative and quantitative descriptions of air, water and solid waste effluents. Consulting and contract laboratories will be identified and their capabilities will be validated.
- #2 Since environmental concerns must now become a part of all new processes, support will be provided for the research that is related to processes and product development. The overall responsibilities will include ARD interaction with personnel from the Environmental Compliance and Engineering Department, with Applied Technology personnel and with all pertinent research and analytical groups at R&D to assure compliance with applicable regulations.

Status:

Analytical methodologies have been developed and applied in support of much of the on-going research and of studies of processing plant effluents. This includes direct work and collaborative efforts related to aqueous and to exhaust gas effluents, residual alkaloids in waste water, TCLP values for proposed land fill waste, solid absorbant efficiencies for specific tobacco related components and insect control systems.

Tactics:

- Develop at-site analytical procedures for selected research studies and support with ARD resources.
- Develop and apply discrete sample/analysis methodologies in support of nicotine destruction studies.
- Develop on-line quantitation for phosphine absorption studies.

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- Provide analytical technology to support work related to ammonia and VOC's reduction.
- Determine methodology for relating 'nitrogen' to 'total Kjeldahl nitrogen'.
- Identify qualified consulting laboratories and develop protocols for continuous quality assurance of their data.
- Investigate the potential for on-line speciation of stack gas effluents using chromatographic and/or spectrometric techniques.
- Participate in the planned sampling/analysis of PM stack effluents in Richmond, Cabarrus and Louisville and provide support in the form of analytical and lab validation data for the (over 350) discrete sampling points.
- Provide BOD, COD and Nitrogen data for waste water and/or sludge streams with elemental composition and TCLP involvement on an as-needed basis.

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